

CLEAN VERSION - REPLACEMENT PAGES

CLAIMS

Having thus described the invention, what I desire to claim and secure by letters patent is:

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1 (Once Amended)

A sprinkler head assembly having off/on water flow control for turning water off and on at said sprinkler head assembly, without interrupting water flow to any adjacent sprinkler heads, said 10 sprinkler head assembly comprising:

a) a generally upright tube which carries water from a subterranean water conduit;

b) a sprinkler head body at the upper end of the generally upright tube and said sprinkler head and generally upright tube having a duct extending therethrough;

c) an insert located at said sprinkler head body for allowing a directionalized spray of water from the subterranean conduit through the sprinkler head;

20 and

d) off/on water flow control valve means comprising a stem extending into one of said ducts for stopping water flow when the stem is in a first position and reinitiating a flow of water through sprinkler head

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assembly when said stem is rotated to a second position about an axis of said stem independently of a main control therefor, thereby allowing servicing of said sprinkler head assembly without the need of controlling water flow at the main control therefor or shutting off water flow to other sprinkler head assemblies receiving water from that subterranean water conduit, said duct and said stem being arranged when in the second position to allow complete water flow and to also allow complete visual observation through said sprinkler head assembly when removed from said subterranean water conduit.

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2 (Resubmitted)

The sprinkler head assembly of Claim 1 further characterized in that said off/on control valve means is located in an upstream position with respect to said insert.

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3 (Once Amended)

The sprinkler head assembly of Claim 1 further characterized in that said off/on control valve means is located in one of a body of the sprinkler head, or in a sprinkler head pop-up riser shaft, or in an adaptive fitting between the sprinkler head body and th

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gen rally upright tube, and said control valve means is in an upstream position with respect to said insert to thereby cut-off water flow before the insert.

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4 (Once Amended)

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cont*

The sprinkler head assembly of Claim 1 further characterized in that said duct passes completely through said sprinkler head assembly, and said stem extends into said sprinkler head assembly and has a surface facing said duct in said assembly to block off water flow when said stem is in a first position into said duct and which allows water flow when said stem is rotated about its central axis so that an axis of an opening in the stem is aligned with the axis of the duct.

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5 (Resubmitted)

The sprinkler head assembly of Claim 3 further characterized in that said off/on control valve means is located in a base of a shrub type stationary sprinkler head.

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6 (Once Amended)

The sprinkler head assembly of Claim 3 further characterized in that said control valve means is in a pop-up riser shaft which forms part of a pop-up sprinkler head and carries said insert at its upper end thereof.

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7 (Once Amended)

The sprinkler head assembly of Claim 1 further characterized

-03 in that said stem is angularly located with respect to an axis of
said duct.

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8 (Resubmitted)

The sprinkler head assembly of Claim 7 further characterized
in that said duct has increased wall thickness and reduced diameter
in the region of said flow control valve means.

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9 (Once Amend d)

An adaptive member for use with a sprinkler head assembly and having a valve means to provide off/on water flow control at said sprinkler head assembly, said adaptive member comprising:

5 a) a manually actuatable on/off water flow control valve located in a position with respect to a generally vertically arranged tube having a duct associated with said assembly and for allowing flow of water through said sprinkler head assembly for controlling flow of water from the sprinkler head assembly supplied by a subterranean water sprinkler system line; and

10 b) a stem forming part of said valve means extending into said duct and being located with respect to a central axis of said duct for stopping water flow when in said stem is in a first position and reinitiating water flow when said stem is shifted to a second position which is angularly shifted with respect to said first position and independently of any main control for said water sprinkler system line.

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10 (Once Amend d)

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The adaptive member of Claim 9 further characterized in that
said stem has an opening aligned with said duct when said stem in
the second position and is out of communication with said duct when
5 the stem is in the first position.

11 (Resubmitted)

The adaptive fitting of Claim 10 further characterized in that
said generally vertically arranged tube is a riser tube and said
fitting is attached to said riser tube which is used in or forms
10 part of said sprinkler head assembly.

12 (Resubmitted)

The adaptive fitting of Claim 11 further characterized in that
15 said off/on control valve forms part of said adaptive member and is
located in a region of the generally vertically arranged tube or
portion of said sprinkler head assembly and which has increased
wall thickness in said duct in the region of said control valve
with respect to the remaining portion of the duct.

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13 (Once Amended)

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The adaptive fitting of Claim 10 further characterized in that
said opening has a diametrical size approximately the same as the
duct and which opening can be rotated in so that the opening is

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Orbit* aligned with said duct to allow water flow and stops flow when the stem is rotated so that an axis of the opening is generally perpendicularly located to a central axis of said duct.

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14 (Once Amended)

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A method for turning water flow off and reinitiating water flow at a sprinkler head and which eliminates the need to control water flow from a master controller or sprinkler valve in order to enable cleaning or servicing or replacement of that sprinkler head, said method comprising:

- a) installing an off/on water flow control valve means in a sprinkler head assembly connected to a subterranean water pipe;
- 10 b) manually actuating a valve stem forming part of a valve means to turn water flow off at said sprinkler head assembly by rotating an opening in said stem out of alignment with a duct of said assembly;
- 15 c) allowing for cleaning or servicing of said sprinkler head assembly with little or no water flowing through said assembly under pressure; and
- d) rotating said plug so that the opening once again becomes aligned with the duct after cleaning or servicing to allow water flow to again commence through said sprinkler head assembly.

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15 (Resubmitted)

The method of Claim 14 further characterized in that said method comprises locating said off/on control valve means in a position upstream with respect to an insert on said sprinkler head assembly.

16 (Resubmitted)

The method of Claim 13 further characterized in that said method allows for removal of said insert when water is turned off at said sprinkler head assembly, cleaning of the insert and re-introduction of the insert followed by initiating water flow again.

17 (Resubmitted)

The sprinkler head assembly of Claim 13 further characterized in that said stem is manually actuatable and extends into said duct generally perpendicularly to a central axis of said duct.

18 (Once Amended)

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The adaptive fitting of Claim 17 further characterized in that said stem is threaded for manually turning said stem to cause said stem to rotate to said first position in said duct and to also rotate to said second position in said duct.

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19 (Resubmitted)

The adaptive fitting of Claim 13 further characterized in that a tool receiving area is formed at an end of said plug to cause threaded turning of said stem in said duct.

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20 (Resubmitted)

The adaptive fitting of Claim 19 further characterized in that said stem has a diametrical size at least as large as that of the duct.

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